

Software Quality Requirements Management Process (RMP) Checklist

Date(s) of Assessment: _____ Project: _____

Assessor(s): _____ Process Assessment: _____

| | | Y, N, NA | F, O | Comments |
|-------------------------------|---|-------------|------|----------|
| ASSESSMENT PREPARATION | | | | |
| 1 | Have standards been identified to clearly define the process assessment? | | | |
| 2 | Were guidelines used to prepare for the assessment? | | | |
| 3 | Has the project submitted any request for deviations or waivers to the defined process? | | | |
| 4 | Have entrance and exit criteria been established for the assessment? | | | |
| 5 | Were the appropriate stakeholders in attendance? | | | |
| MANAGING REQUIREMENTS | | | | |
| 6 | Is there an approved set of requirements? | | | |
| 7 | Are the requirements for the project under configuration management (CM) control? | | | |
| 8 | Is there a process for analyzing requirements for a project? | | | |
| 9 | Does the process have a distribution list for requirement reviewers? | | | |
| 10 | Does the process have a return or need information date for responses? | | | |
| 11 | Does the process have a format for reviewers to provide input for cost or schedule information? | | | |
| 12 | Have adequate resources and funding been provided for managing the requirements? | | | |

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| 13 | Is there evidence that software requirements have been reviewed by software managers & other affected groups (i.e., test, systems engineering, QA, CM, etc.)? | | | |
| 14 | Is there evidence that the members of the software development, engineering, and other software-related groups have been trained to perform their requirement management activities? | | | |
| 15 | Is there evidence that the software group uses the allocated requirements as the basis for software plans, work products, and activities? | | | |
| 16 | Is there evidence that measurements have been made and used to determine the status of the activities for managing requirements? | | | |
| 17 | Is there a Requirements Management Tool used for managing and tracing requirements (e.g., DOORS, ReqPro, etc.)? | | | |
| MANAGING BIDIRECTIONAL TRACEABILITY OF REQUIREMENTS | | | | |
| 18 | Does a Software Requirements Traceability Matrix (SRTM) exist and include a list of requirements broken down to the lowest testable level? | | | |
| 19 | Have all requirements been traced back to their source? | | | |
| 20 | Have all requirements been traced forward to design, products, test cases, and test verification status? | | | |
| 21 | Has the Software Requirements Traceability Matrix (SRTM) been updated with requirements, as necessary? | | | |
| 22 | Is there a process for adding new requirements to the baseline Software Requirements Traceability Matrix (SRTM)? | | | |

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Y=Yes, N=No, NA=Not Applicable, F=Finding, O=Observation

For more information, please visit the NASA GSFC Software Assurance Website, at <http://sw-assurance.gsfc.nasa.gov>.

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| 23 | Is the Software Requirements Traceability Matrix (SRTM) under configuration management (CM) control? | | | |
| 24 | Is the Software Requirements Traceability Matrix (SRTM) stored in a central location so that all project members can use the same version for their specific activities? | | | |
| MANAGING REQUIREMENT CHANGES | | | | |
| 25 | Is there a change control process for managing requirement changes? | | | |
| 26 | Are formal meetings held to review and approve all requirement changes? | | | |
| 27 | Does the approval mechanism involve management, as well as the customer? | | | |
| 28 | Does SQA participate in the change control process? | | | |
| 29 | Does the process identify any inconsistencies between the project work and the requirements? | | | |
| 30 | Have all requirement changes (if any) been reviewed and approved by the customer? | | | |
| RESOLVING REQUIREMENT ISSUES WITH CUSTOMERS AND DEVELOPERS | | | | |
| 31 | Is there a process in place for resolving requirement issues with customers and developers? | | | |
| POST ASSESSMENT ACTIVITIES | | | | |
| 32 | At the conclusion of the review is an understanding reached on the validity and degree of completeness of the Requirements Management Process? | | | |
| 33 | Did all designated parties concur in the acceptability of the Requirements Management Process? | | | |
| 34 | Are there any risks, issues, or request for actions (RFAs) that require follow-up? | | | |

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| 35 | Is there a process in place for reviewing and tracking the closure of risks, issues, or RFAs? | | | |
| 36 | Were Lessons Learned addressed and captured? | | | |
| REFERENCE ITEMS/DOCUMENTS | | | | |
| <i>IEEE Standard for Software Reviews, IEEE Std 1028-1997</i> | | | | |
| <i>Capability Maturity Model Integration (CMMI,) Version 1.1</i> | | | | |
| <i>300-PG-7120.2.2D, Mission Assurance Guide (MAG) for Tailoring to the Needs of Goddard Space Flight Center (GSFC) Projects</i> | | | | |
| <i>NASA-STD-8719.13, NASA Software Safety Standard</i> | | | | |
| <i>NASA-STD-8739.8, NASA Software Assurance Standard</i> | | | | |
| <i>NASA-GB-8719.13, NASA Software Safety Guidebook</i> | | | | |
| <i>NPR 7150.2, NASA Software Engineering Requirements</i> | | | | |

